Subst. cancel. B' cancel.

27. (New) The master communication unit of claim 22, wherein the one or more synchronous communications links and the one or more asynchronous communications links operate in accordance with a frameless protocol. --

REMARKS

Claims 1-27 are now pending in the application. New claims 25-27 have been added without introduction of new matter. Favorable reconsideration is respectfully requested in view of the following remarks.

The indication that claims 4, 8, 9, 15, 19-21 and 23 define patentable subject matter is noted with appreciation.

Prior to addressing the substantive issues raised in the Action, it is noted that on page 2, the Office Action states, "The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e))."

Applicant respectfully requests that this determination be reconsidered. In particular, the Examiner is asked to consider the effect that even more recent changes to the law may have had on the definition of §102(e) prior art with respect to this application. In particular, it is believed that in accordance with the changes to the AIPA made in

November 2002, references that became 102(e) prior art by virtue of the AIPA could be cited regardless of when the application being examined was filed.

Turning now to the substantive issues raised in the Action, claims 1-3, 10-14 and 22 were rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by U.S. Patent No. 6,055,242 to *Doshi et al.* (henceforth, "*Doshi et al.*"). This rejection is respectfully traversed.

The invention addresses problems that arise when it is desired to use a shared communication medium to communicate both synchronous and asynchronous data. If the medium is configured to support only circuit switched connections, the delivery requirements imposed by the synchronous data can be met; however, this is wasteful of medium resources when asynchronous data is transmitted, since the dedicated connection will often be left unused. Alternatively, configuring the medium to support only asynchronous data communication makes the most efficient use of the resource, but can result in unacceptable delivery times for the synchronous data.

The invention permits both synchronous and asynchronous communication links to be established on the same shared communication medium by dividing the communication medium into sequentially occurring time slots, and allocating some time slots for use as one or more synchronous communications links, and allocating other time slots for use as one or more asynchronous communications links. In order to provide great flexibility in the allocation, the invention calls for the address of the intended recipient to be included in the transmission. The intended recipient can thereby recognize that the transmitted packet is intended for him. Moreover, other communication units need not keep track of whether

that particular time slot is being used for synchronous or asynchronous transmissions, since in either case the fact that a different communication unit's address is included in the packet informs a unit that it is not the intended recipient and needn't be concerned with it.

Accordingly, claim 1 defines a method for establishing a link on a shared communications channel divided into a plurality of time slots, the method comprising the steps of: establishing a synchronous communications link between a first and second communication unit; and communicating a first data packet on a first one of the set of time slots associated with the synchronous communication link from the first communication unit to the second communication unit by including an address associated with the second communication unit in the first data packet. (Emphasis added.)

Independent apparatus claims 12 and 22 similarly define the inclusion of a recipient's address in a data packet transmitted over a synchronous communication link.

It is well-established that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The *Doshi et al.* reference fails to meet this standard, and therefore fails to anticipate any of independent claims 1, 12 and 22 at least because it neither discloses nor even suggests "communicating a first data packet on a first one of the set of time slots associated with the synchronous communication link from the first communication unit to the second communication unit by including an address associated with the second communication unit in the first data packet." (Emphasis added.)

Doshi et al. disclose a broadband multiple access protocol for bi-directional hybrid fiber/coax (HFC) networks. The protocol supports different access modes such as synchronous transfer mode (STM), asynchronous transfer mode (ATM), and variable length (VL) data. In order to satisfy the quality of service requirements of varied applications, while maintaining high bandwidth efficiency, the protocol utilizes a frame structure with frame partitioning into regions; one region dedicated to STM payload and an asynchronous, second region dedicated to ATM and VL payloads, messaging and control.

In contrast to the claimed invention in the present application, *Doshi et al.* do not disclose including an address associated with the second communication unit in the first data packet when that packet is communicated on a time slot associated with the synchronous communication link. To the contrary, *Doshi et al.* describe a system in which synchronous time slots are preallocated to particular recipients; thus there is no need to include the recipient's address. More particularly , *Doshi et al.*'s FIG. 4 and supporting text spanning column 6, line 46 to column 8, line 11 describe the frame structure that is in use in the downstream direction. Within this discussion, at column 7, lines 13-16, *Doshi et al.* expressly state that "Synchronous time slots are assigned to voice or video telephony connections at the time of connection and are reallocated when associated connections are terminated." Furthermore, *Doshi et al.* state, at column 7, lines 24-26, that each synchronous time slot is only one byte in length -- hardly enough to convey a recipient address in addition to a payload.

The time slots in the upstream direction are a bit larger -- 27 bytes. (See, e.g., *Doshi et al.* at column 13, lines 21-22.) *Doshi et al.*'s FIG. 13a and supporting text at

column 14, lines 18-32, describe the format of these 27 bytes. It is clear from this description that no part of the upstream STM packet includes a recipient address. Nor is one needed for allocation because, as *Doshi et al.* expressly state at column 13, lines 22-24, "One STM time slot 1215 is dedicated to each upstream DS0 connection."

Notwithstanding the above, the Office relies on *Doshi et al.*'s FIG. 8 and supporting text at column 11, lines 29-42 in support of its assertion that *Doshi et al.* discuss "[s]ynchronous communications ... between a first ... and second unit ... that include an address ... or 'modem address' associated with the second unit included in the first data packet or PDU." This reliance is unfounded because FIG. 8 illustrates the available downstream PDU formats for asynchronous bytestream space. (See, e.g., *Doshi et al.* at column 10, lines 63-64.) As to the text at column 11, lines 29-42, it is merely supporting text for FIG. 8, and therefore also pertains only to the formats for asynchronous bytestream space. Thus, those portions of *Doshi et al.* relied upon in the Office Action cannot be relied upon to disclose anything pertaining to the synchronous data packet format required by Applicant's claims.

For at least the foregoing reasons, independent claims 1, 12 and 22, as well as the dependent claims 2-3, 10-11 and 13-14 which variously depend therefrom, are believed to be patentably distinguishable over the *Doshi et al.* patent. It is therefore respectfully requested that the rejection of claims 1-3, 10-14 and 22 under Section 102 be withdrawn.

Claims 5-7, 16-18 and 24 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Doshi et al.* in view of U.S. Patent No. 6,011,784 to *Brown et al.* (henceforth, *Brown et al.*). This rejection is respectfully traversed.

Claims 5-7, 16-18 and 24 variously depend from independent claims 1, 12 and 22, and are therefore patentably distinguishable over the *Doshi et al.* patent for at least the reasons set forth above with respect to the rejection of those base claims. Furthermore, the *Brown et al.* patent fails to make up for the deficiencies of *Doshi et al.*. Thus, claims 5-7, 16-18 and 24 are patentably distinguishable over the *Doshi et al.* and *Brown et al.* documents, whether considered individually or in combination. It is therefore respectfully requested that the rejection of claims 5-7, 16-18 and 24 under Section 103 be withdrawn.

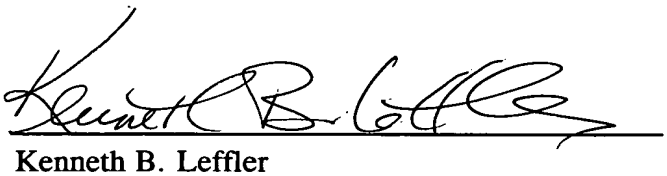
New claims 25-27 have been added without introduction of new matter. These claims define the synchronous (and in claim 24, the asynchronous) communication links operating in accordance with a frameless protocol. Support for these amendments is found throughout the specification. (See, e.g., page 10, lines 14-16.)

Claims 25-27 depend from claim 1, 12 and 22, and are therefore patentable over the prior art of record for at least the reasons set forth above. Furthermore, the various references applied in the various rejections fail to disclose a synchronous communication link being supported by a frameless protocol.

The application is believed to be in condition for allowance. Prompt notice of same is respectfully requested. In the event that the Examiner has any questions about this application, he is kindly invited to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: 

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